

PATENT 85RM-00104

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.: 7,188,084

Issued: March 6, 2007

Inventor(s): Starkman

Assignee: General Electric Capital Corporation

For: METHODS AND SYSTEMS FOR DETERMINING ROLL RATES OF

LOANS

Certificate

MAR 11 2009

of Correction

CERTIFICATE OF MAILING

I certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on March 03, 2009.

Daniel M. Fitzgerald Reg. No. 38,880

Attention Certificate of Corrections Branch Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT UNDER 37 C.F.R. 1.322(a)

Sir:

Attached is Form PTO/SB/44 suitable for printing.

Submitted herewith is a copy of the Notice of Allowance and Fee(s) Due and the Notice of Allowability dated December 26, 2006 including an Examiner's Amendment amending Claims 1, 7, and 15, and a copy of the claims from the Amendment filed May 8, 2006. Applicant respectfully submits that the corrections shown below are in accordance with the Examiner's Amendment dated December 26, 2006 and the claims from the Amendment filed May 8, 2006. The corrections do not involve such changes in the patent as would constitute new matter or would require re-examination. Applicant respectfully requests a Certificate of Correction for the following:

In Claim 7, column 7, line 58, delete "tan zero" and insert therefor -- than zero --.

In Claim 11, column 8, line 39, delete "analyze, the" and insert therefor -- analyze the

In Claim 12, column 9, line 4, delete "con figured" and insert therefor -- configured --

In Claim 22, column 10, line 3, delete "calculate, by" and insert therefor -- calculate by --.

In Claim 23, column 10, line 24, delete "wit respect" and insert therefor -- with respect --.

The corrections are not due to any error by Applicant and no fee is due.

The Assignment for this patent is recorded on Reel 011726/Frame 0306.

Respectfully submitted,

Date: 3-09

Daniel M. Fitzgerald

Reg. No. 38,880

ARMSTRONG TEASDALE LLP One Metropolitan Square, Suite 2600 St. Louis, Missouri 63102-2740

(314) 621-5070

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UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO.

: 7,188,084

APPLICATION NO.

09/751,900

ISSUE DATE

March 6, 2007

INVENTOR(S)

Starkman

PAGE 1 0F 1

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In Claim 7, column 7, line 58, delete "tan zero" and insert therefor -- than zero --.

In Claim 11, column 8, line 39, delete "analyze, the" and insert therefor -- analyze the --.

In Claim 12, column 9, line 4, delete "con figured" and insert therefor -- configured --.

In Claim 22, column 10, line 3, delete "calculate, by" and insert therefor -- calculate by --.

In Claim 23, column 10, line 24, delete "wit respect" and insert therefor -- with respect --.

MAILING ADDRESS OF SENDER: Daniel M. Fitzgerald Armstrong Teasdale LLP

One Metropolitan Sq., Suite 2600

St. Louis, MO 63102

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the bublic which is to file (and by the USPTO to process) an application. Confidentially in a second confidential confidentially in a second confidential confidentially in a second confidential c file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.





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NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

12/26/2006

John S. Beulick Armstrong Teasdale LLP One Metropolitan Sq., Suite 2600 St. Louis, MO 63102

EXAMINER				
PATEL	PATEL, JAGDISH			
ART UNIT	PAPER NUMBER			
3693				

DATE MAILED: 12/26/2006

ĺ	APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
	09/751.900	12/29/2000	Hartley C. Starkman	60709-00011	9152

TITLE OF INVENTION: METHODS AND SYSTEMS FOR DETERMINING ROLL RATES OF LOANS

Г	APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
	nonprovisional	NO	\$1400	\$300	\$0	\$1700	03/26/2007

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown

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If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

2009

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number.	Please direct all communications prior	to issuance to
Mail Stop ISSUE FEE unless advised to the contrary.	1,25-00	MAR 1 1

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 many emperopayment of

Rv.

maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due. Date: 12/30 Date

Page 1 of 3

PTOL-85 (Rev. 07/06) Approved for use through 04/30/2007.







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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO	
09/751,900	12/29/2000	Hartley C. Starkman	60709-00011	9152	
John S. Beulick Armstrong Teasdale LLP One Metropolitan Sq., Suite 2600 St. Louis, MO 63102			EXAM	EXAMINER	
			PATEL, JAGDISH		
		ART UNIT	PAPER NUMBER		
			3693 DATE MAILED: 12/26/2006	6	

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 228 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 228 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.





	Application No.	Applicant(s)
	09/751,900	STARKMAN, HARTLEY C.
Notice of Allowability	Examiner	Art Unit
	JAGDISH PATEL	3693
The MAILING DATE of this communication appear All claims being allowable, PROSECUTION ON THE MERITS IS (herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGOT (of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in or other appropriate commo GHTS. This application is s	n this application. If not included unication will be mailed in due course. THIS
1. This communication is responsive to <u>5/8/2006</u> .		
2. ⊠ The allowed claim(s) is/are <u>1-31</u> .		
3. Acknowledgment is made of a claim for foreign priority un a) All b) Some* c) None of the: 1. Certified copies of the priority documents have 2. Certified copies of the priority documents have 3. Copies of the certified copies of the priority documents have International Bureau (PCT Rule 17.2(a)). * Certified copies not received: Applicant has THREE MONTHS FROM THE "MAILING DATE" of noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.	been received. been received in Application cuments have been received of this communication to file	on No d in this national stage application from the
 A SUBSTITUTE OATH OR DECLARATION must be submi INFORMAL PATENT APPLICATION (PTO-152) which give 	tted. Note the attached EX	AMINER'S AMENDMENT or NOTICE OF r declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") musically including changes required by the Notice of Draftsperson. (a) ☐ including changes required by the Notice of Draftsperson. (b) ☐ including changes required by the attached Examiner's Paper No./Mail Date Identifying indicta such as the application number (see 37 CFR 1. each sheet. Replacement sheet(s) should be labeled as such in the deposit of the	on's Patent Drawing Review Amendment / Comment o 84(c)) should be written on the header according to 37 Clistic of BIOLOGICAL MAT	r in the Office action of he drawings in the front (not the back) of FR 1.121(d). ERIAL must be submitted. Note the
Attachment(s) 1. ☐ Notice of References Cited (PTO-892) 2. ⊠ Notice of Draftperson's Patent Drawing Review (PTO-948)	6. 🔲 Interview S	oformal Patent Application ummary (PTO-413),
3. ☐ Information Disclosure Statements (PTO/SB/08),		/Mail Date Amendment/Comment
Paper No./Mail Date 4. Examiner's Comment Regarding Requirement for Deposit of Biological Material	8. ⊠ Examiner's 9. ☐ Other	Statement of Reasons for Allowance
		MAR 1 1 1



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DETAILED ACTION

This communication is in response to amendment filed 5/8/2006. 1.

Response to Amendment

2. Claims 1, 7 and 15 have been amended.

Response to Arguments

Claims 1-31 have been allowed based upon the Examiner's Amendment as follows. 3.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or 4. additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Att. Daniel M. Fitzgerald (Reg. No. 38,880) on 12/18/06.

Amendment to the Claims

Please amend claims 1, 7 and 15 as follows:



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- 1. (Currently amended) A method for managing a distressed loan portfolio using roll rates for a group of non-stationary asset-based loans utilizing a computer, the group of non-stationary asset-based loans included within the distressed loan portfolio, said method comprising the steps of:
- (a) predicting a payment behavior for a borrower of a non-stationary asset-based loan included within a distressed loan portfolio utilizing a collections model wherein the payment behavior includes whether the borrower will submit a timely payment and a payment amount relative to a contractual delinquency for the associated loan, wherein the collections model is based on historical payment information of the borrower and a plurality of collection strategies for collecting payment from the borrower, and wherein the non-stationary asset based loans include at least one of automobile loans, vehicle loans, and credit card loans;
 - (b) initiating at least one of the plurality of collection strategies with respect to the borrower and the payment of the associated loan;
- (c) analyzing the borrower's payment behavior after initiating the at least one collection strategy;
- (d) comparing the borrower's payment behavior after initiating the at least one collection strategy to the predicted payment behavior of the borrower;
 - (e) updating the collections model based on the borrower's payment behavior comparison;
 - (f) calculating with a computer an amount generated and expenses incurred from

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repossessing a non-stationary asset used as collateral for the borrower's loan utilizing a remarketing model, the re-marketing model further calculates a probability that an event will occur impacting payment of the borrower's loan;

- (g) generating delinquency moving matrices that include the borrower's loan to facilitate predicting roll rates;
- (h) predicting a roll rate into a next level of delinquency for the borrower and the associated loan using the updated collections model, the calculated amount generated and expenses incurred, and the calculated probability that an event will occur that is calculated by the re-marketing model;
- (i) repeating steps (a)-(h) for each loan included within the group of non-stationary assetbased loans: and
- (j) managing the loan portfolio by forecasting cash flow for the loan portfolio based on the predicted roll rate of each loan included within the group of non-stationary asset-based loans.
- 7. (currently amended) A system for managing a distressed loan portfolio using roll rates for a group of non-stationary asset-based loans, the group of non-stationary asset-based loans included within the distressed loan portfolio, said system comprising:

at least one computer;

a server configured with a roll rate determination model including a collections model and a re-marketing model, said server configured to:

(a) predict, by accessing the collections model, a payment behavior for a borrower of a non-stationary asset based loan included within the distressed loan portfolio

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- wherein the payment behavior includes whether the borrower will submit a timely payment and a payment amount relative to a contractual delinquency for the associated loan, wherein the collections model is based on historical payment information of the borrower and a plurality of collection strategies for collecting payment from the borrower, and wherein the non-stationary asset based loans include at least one of automobile loans, vehicle loans, and credit card loans; (b) analyze the borrower's payment behavior after initiating at least one of the plurality of collection strategies;
- (c) compare the borrower's payment behavior after initiating the at least one collection strategy to the predicted payment behavior of the borrower;
- (d) update the collections model based on the borrower's payment behavior comparison;
- (e) calculate, by accessing the re-marketing model, an amount generated and expenses incurred from repossessing a non-stationary asset used as collateral for the borrower's loan, the re-marketing model further calculates a probability that an event will occur impacting payment of the borrower's loan;
- (f) generate delinquency moving matrices that include the borrower's loan to facilitate predicting roll rates;
- (g) predict whether the borrower's loan will roll forward into a next classification of delinquency using the updated collections model, the calculated amount generated and expenses incurred, and the calculated probability that an event will occur that are calculated by the re-marketing model;



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- (h) repeat steps (a)-(g) for each loan included within the loan portfolio; and
- (j) manage the loan portfolio by forecasting cash flow for the loan portfolio based on the predicted roll rate of each loan included within the group of non-stationary asset-based loans; and

a network connecting said computer to said server to enable said computer to communicate with said server.

- 15. (currently amended) A computer for managing a distressed loan portfolio using roll rates for a group of non-stationary asset-based loans, the group of non-stationary asset-based loans included within the distressed loan portfolio, said computer comprising a processor and programmed to:
- (a) predict, by accessing a collections model, a payment behavior for a borrower of a non-stationary asset-based loan included within the distressed loan portfolio wherein the payment behavior includes whether the borrower will submit a timely payment and a payment amount relative to a contractual delinquency for the

associated loan, wherein the collections model is based on historical payment information of the borrower and a plurality of collection strategies for collecting payment from the borrower, and wherein the non-stationary asset based loans include at least one of automobile loans, vehicle loans, and credit card loans;

(b) analyze the borrower's payment behavior after initiating at least one of the

(c) compare the borrower's payment behavior after initiating the at least one

plurality of collection strategies;



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- collection strategy to the predicted payment behavior of the borrower;
- (d) update the collections model based on the borrower's payment behavior comparison;
- (e) calculate, by accessing the re-marketing model, an amount generated and expenses incurred from repossessing a non-stationary asset used as collateral for the borrower's loan, the re-marketing model further calculates a probability that an event will occur impacting payment of the borrower's loan;
- (f) generate delinquency moving matrices that include the borrower's loan to facilitate predicting roll rates;
- (g) predict whether the borrower's loan will roll forward into a next classification of delinquency using the updated collections model, the calculated amount generated and expenses incurred, and the calculated probability that an event will occur that are calculated by the re-marketing model;
- (h) repeat steps (a)-(g) for each loan included within the loan portfolio; and
- (j) manage the loan portfolio by forecasting cash flow for the loan portfolio based on the predicted roll rate of each loan included within the group of non-stationary asset-based loans.

Reasons for Allowance

5. The following is an examiner's statement of reasons for allowance:

The claimed inventions pertain to managing a distressed loan portfolio using roll rates for a group of non-stationary asset-based loans.



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Claims 1-31 are allowed because the prior art of record discussed below and deemed most relevant fails to teach or fairly suggest management of loans or mortgages using the concept of predicted "roll rate" of individual loans in a portfolio of loans as further explained below.

For clarification the term "roll rate" is to be interpreted in light of the specification. The specification in paragraph [0037] of the PG Publication recites:

Roll rate as used herein is calculated by a determination of the value of each loan, in aggregate, that has rolled forward from, for example, 30 days delinquent to 60 days delinquent that is, determining those accounts that did not pay. Alternatively, some accounts may roll back, that is, a 90 day delinquent loan may receive two payments in a month, thereby rolling back to 60 days late. Determination of roll back and roll forward help in aligning collectors and collection efforts by using model 10, to predict which buckets accounts will be in. Prediction of which buckets accounts will be located, allows allocation of collectors for each level of delinquency and allows focus of collection efforts as continued deterioration of the portfolio occurs.

- 6. The claimed invention recites forecasting cash flow for the loan portfolio by predicting a roll rate for each loan in the loan portfolio into a next level of delinquency for a borrower and the associated loan. The prediction of the roll rate of each loan is based upon the following parameters:
 - (i) delinquency moving matrices,
- (ii) amount generated and expenses incurred from repossessing an asset used as a collateral for the loan,



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- (iii) updated collections model based upon the borrowers payment behavior and
- (v) calculated probabilities that an event will occur impacting payment of the loan.

The closest prior art if record is Freeman et al. (US 6,249,775) (Freeman). Freeman discloses process and apparatus to analyze and select loan portfolios for either continued or future investment by a financial institution. Each loan portfolio comprises a plurality of loan units and the system operates by separating the loan portfolios into a plurality of loan vintages, in a manner such that the loans included in each loan vintage have origination dates that are on average of the same age. The system of the invention produces an analysis of the past performance of loan portfolios, as well as an indication of the future performance thereof in two different formats. The early warning system (EWS) constituent of the invention is one of the systems and processes which predicts the percentage of the loans in a given loan vintage which are likely to enter a "bad" state within a predefined forward looking time window, for example, the next two years. Finally, the so-called matrix link component of the present invention is generally similar to the aforementioned early warning system in that it is a prediction tool. It differs from the early warning system in the respect that it is capable of forecasting the percentage of loans that are likely to be bad at a date certain within the aforementioned forward looking time window.

Freeman however, does not teach the determination of "roll rates" of individual loan in a loan portfolio and forecasting cash flow for the loan portfolio based on the predicted roll rate of each loan included within the group of non-stationary asset-based loans.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue



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Allowance."

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAGDISH PATEL whose telephone number is (571) 272-6748.

The examiner can normally be reached on 800/AM-630PM-Mon-The and Thus

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **KRAMER JAMES A** can be reached on **(571)272-6783**. The fax phone number for the organization where this application or proceeding is assigned is 517-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jagdish N. Patel

(Primary Examiner, AU 3693)

12/18/06



COPY

60709-00011 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Hartley C. Starkman

Art Unit: 3624

Serial No.: 09/751,900

Examiner: Jagdish Patel

Filed: December 29, 2000

:

For: METHODS AND SYSTEMS FOR

DETERMINING ROLL RATES OF

LOANS

AMENDMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313

In response to the Office Action dated January 10, 2006, Applicant respectfully requests entry and consideration of the following amendment.



IN THE CLAIMS

. .)

- 1. (currently amended) A method for determining roll rates for a group of non-stationary asset-based loans utilizing a computer, the group of non-stationary asset-based loans included within a distressed loan portfolio, said method comprising the steps of:
- (a) predicting a payment behavior for a borrower of a non-stationary asset-based loan included within a distressed loan portfolio utilizing a collections model wherein the payment behavior includes whether the borrower will submit a timely payment and a payment amount relative to a contractual delinquency for the associated loan, wherein the collections model is based on historical payment information of the borrower and a plurality of collection strategies for collecting payment from the borrower, and wherein the non-stationary asset based loans include at least one of automobile loans, vehicle loans, and credit card loans;
- (b) initiating at least one of the plurality of collection strategies with respect to the borrower and the payment of the associated loan;
- (c) analyzing the borrower's payment behavior after initiating the at least one collection strategy;
- (d) comparing the borrower's payment behavior after initiating the at least one collection strategy to the predicted payment behavior of the borrower;
- (e) updating the collections model based on the borrower's payment behavior comparison;
- (f) calculating with a computer an amount generated and expenses incurred from repossessing [[the]] a non-stationary asset used as collateral for the borrower's loan utilizing a

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60709-00011 PATENT

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re-marketing model, the re-marketing model further calculates a probability that an event will occur impacting payment of the borrower's loan;

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- (g) generating delinquency moving matrices that include the borrower's loan to facilitate predicting roll rates;
- (h) predicting a roll rate into a next level of delinquency for the borrower and the associated loan using the updated collections model, the calculated amount generated and expenses incurred, and the calculated probability that an event will occur that are calculated by the re-marketing model; and
- (i) repeating steps (a)-(h) for each loan included within the group of non-stationary assetbased loans.
- 2. (original) A method according to Claim 1 wherein said step of predicting a roll rate into a next level of delinquency further comprises the step of determining estimates with respect to payments.
- 3. (original) A method according to Claim 1 wherein said step of generating delinquency moving matrices further comprises the step of assigning probability distributions to loan delinquency assumptions.
- 4. (previously presented) A method according to Claim 1 wherein said step of predicting a roll rate into a next level of delinquency further comprises the step of analyzing loans that roll forward into a next period of delinquency, due to non-payment.

- 5. (previously presented) A method according to Claim 4 wherein said step of analyzing loans that roll forward into a next period of delinquency further comprises the step of calculating a delinquency value that has increased from a first period to a second period.
- 6. (previously presented) A method according to Claim 1 wherein said step of predicting a roll rate into a next level of delinquency further comprises the step of analyzing loans that roll back one or more periods of delinquency, due to extra received payment.
- 7. (currently amended) A system for determining a roll rate of a distressed loan portfolio including non-stationary asset based loans, said system comprising:

at least one computer;

a server configured with a roll rate determination model including a collections model and a re-marketing model, said server configured to:

- (a) predict, by accessing the collections model, a payment behavior for a borrower of a non-stationary asset based loan included within the distressed loan portfolio wherein the payment behavior includes whether the borrower will submit a timely payment and a payment amount relative to a contractual delinquency for the associated loan, wherein the collections model is based on historical payment information of the borrower and a plurality of collection strategies for collecting payment from the borrower, and wherein the non-stationary asset based loans include at least one of automobile loans, vehicle loans, and credit card loans;
- (b) analyze the borrower's payment behavior after initiating at least one of the plurality of collection strategies;



(c) compare the borrower's payment behavior after initiating the at least one collection strategy to the predicted payment behavior of the borrower;

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- (d) update the collections model based on the borrower's payment behavior comparison;
- (e) calculate, by accessing the re-marketing model, an amount generated and expenses incurred from repossessing [[the]] a non-stationary asset used as collateral for the borrower's loan, the re-marketing model further calculates a probability that an event will occur impacting payment of the borrower's loan;
- (f) generate delinquency moving matrices that include the borrower's loan to facilitate predicting roll rates;
- (g) predict whether the borrower's loan will roll forward into a next classification of delinquency using the updated collections model, the calculated amount generated and expenses incurred, and the calculated probability that an event will occur that are calculated by the re-marketing model; and
- (h) repeat steps (a)-(g) for each loan included within the loan portfolio; and

a network connecting said computer to said server to enable said computer to communicate with said server.

- 8. (original) A system according to Claim 7 wherein said server configured to determine estimates with respect to payments.
- 9. (original) A system according to Claim 7 wherein said server configured to assign probability distributions to loan delinquency assumptions.



10. (previously presented) A system according to Claim 7 wherein said server is configured to analyze the loans that roll forward into a next period of delinquency, due to non-payment.

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- 11. (previously presented) A system according to Claim 10 wherein said server is configured to calculate a delinquency value that has increased from a first period to a second period for the loans that roll forward into the next period of delinquency.
- 12. (previously presented) A system according to Claim 7 wherein said server is configured to analyze the loans that roll back one or more periods of delinquency, due to extra received payment.
- 13. (previously presented) A system according to Claim 7 wherein said server is configured to predict the loans that will roll forward into an n-month delinquency, wherein n is an integer greater than zero and represents a number of months for which one of the customers has been delinquent in making a payment.
- 14. (original) A system according to Claim 7 wherein said network is at least one of a WAN or a LAN.
- 15. (currently amended) A computer for determining a roll rate of a distressed loan portfolio including non-stationary asset-based loans, said computer comprising a processor and programmed to:
- (a) predict, by accessing a collections model, a payment behavior for a borrower of a non-stationary asset-based loan included within the distressed loan portfolio wherein the payment behavior includes whether the borrower will submit a timely payment and a payment

amount relative to a contractual delinquency for the associated loan, wherein the collections model is based on historical payment information of the borrower and a plurality of collection strategies for collecting payment from the borrower, and wherein the non-stationary asset based loans include at least one of automobile loans, vehicle loans, and credit card loans;

- (b) analyze the borrower's payment behavior after initiating at least one of the plurality of collection strategies;
- (c) compare the borrower's payment behavior after initiating the at least one collection strategy to the predicted payment behavior of the borrower;
 - (d) update the collections model based on the borrower's payment behavior comparison;
- (e) calculate using a re-marketing model an amount generated and expenses incurred from repossessing [[the]] a non-stationary asset used as collateral for the borrower's loan, the remarketing model further calculates a probability that an event will occur impacting payment of the borrower's loan;
- (f) generate delinquency moving matrices that include the borrower's loan to facilitate predicting roll rates;
- (g) predict whether the borrower's loan will roll forward into a next classification of delinquency using the updated collections model, the calculated amount generated and expenses incurred, and the calculated probability that an event will occur that are calculated by the remarketing model; and
 - (h) repeat steps (a)-(g) for each loan included within the loan portfolio.

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- 16. (original) A computer according to Claim 15 programmed to determine estimates with respect to payments.
- 17. (original) A computer according to Claim 15 programmed to assign probability distributions to loan delinquency assumptions.
- 18. (previously presented) A computer according to Claim 15 wherein said computer is programmed to analyze the loans that roll forward into a next period of delinquency, due to non-payment.
- 19. (previously presented) A computer according to Claim 18 wherein said computer is programmed to calculate a delinquency value that has increased from a first period to a second period for the loans that roll forward into a next period of delinquency.
- 20. (previously presented) A computer according to Claim 15 wherein said computer is programmed to analyze the loans that roll back one or more periods of delinquency, due to extra received payment.
- 21. (previously presented) A computer according to Claim 15 wherein said computer is programmed to predict the loans that will roll forward into an n-month delinquency, wherein n is an integer greater than zero and represents a number of months for which one of the customers has been delinquent in making a payment.
- 22. (previously presented) A method according to Claim 1 wherein said step of repeating steps further comprises predicting the loans in the group of loans that will be rolled forward into an n-month delinquency, wherein n is an integer greater than zero and represents a number of months for which one of the customers has been delinquent in making a payment.

- 23. (previously presented) A method according to Claim 1 wherein said step of calculating with a computer further comprises calculating with a computer, utilizing the remarketing model, a probability that an event will occur impacting payment of the borrower's loan wherein the event includes at least one of a change in political climate, an increase in interest rate, and a natural disaster.
- 24. (previously presented) A system according to Claim 7 wherein the event includes at least one of a change in political climate, an increase in interest rate, and a natural disaster.
- 25. (previously presented) A computer according to Claim 15 wherein the event includes at least one of a change in political climate, an increase in interest rate, and a natural disaster.
- 26. (previously presented) A method according to Claim 1 wherein predicting a payment behavior for a borrower further comprises predicting a payment behavior for a borrower of a non stationary asset-based loan included within a distressed loan portfolio utilizing a collections model that is based on historical payment information of the borrower, wherein the historical payment information of the borrower includes information relating to the payment of the loan by the borrower for a period of no more than six-months prior to a last payment due date of the loan.
- 27. (previously presented) A method according to Claim 1 further comprising the step of initiating another collection strategy with respect to the borrower when after initiating the at least one of the plurality of collection strategies the borrower's payment behavior does not correspond with the borrower's predicted payment behavior.



- 28. (previously presented) A system according to Claim 7 wherein the historical payment information of the borrower includes information relating to the payment of the loan by the borrower for a period of no more than six-months prior to a last payment due date of the loan.
- 29. (previously presented) A system according to Claim 7 wherein said server is configured to prompt a user to initiate another collection strategy with respect to the borrower when after initiating the at least one of the plurality of collection strategies the borrower's payment behavior does not correspond with the borrower's predicted payment behavior.
- 30. (previously presented) A computer according to Claim 15 wherein the historical payment information of the borrower includes information relating to the payment of the loan by the borrower for a period of no more than six-months prior to a last payment due date of the loan.
- 31. (previously presented) A computer according to Claim 15 wherein said computer is programmed to prompt a user to initiate another collection strategy with respect to the borrower when after initiating the at least one of the plurality of collection strategies the borrower's payment behavior does not correspond with the borrower's predicted payment behavior.